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TITLE: System, method and article of manufacture for security management in a development architecture framework

Detailed Description Text (247):

A vast amount of information is generated within the development environment, which needs to be carefully managed (for example, design documentation, application code, media content, test plans and test data). Information Management generally involves Repository Management, Folder Management and, where applicable, Object Management and Media Content Management. Since a number of teams rely on the service provided by the information management team, it is important that the level of service to be provided be chosen carefully, documented, and communicated. The arrangement should take the form of a Service Level Agreement (SLA). Such an SLA typically defines how quickly a new data element is created and how repository changes are communicated. More generally it defines the division of responsibilities between the information management team and the other project teams at a detailed level.

Detailed Description Text (511):

Management of Service Level Agreements (SLAs)

Detailed Description Text (515):

In order to plan and organize the development work appropriately, a Service Level Agreement (SLA) must be in place between the Service Management group (typically part of the Environment Management team) and the developers. As with all other components of the development environment, this agreement should be kept simple. It should specify the following:

Detailed Description Text (520):

Specifications of service levels should be precise and the service must be measurable. The SLA should also specify how to measure this service (for example, system response times, request service times, backup frequencies). In addition, the SLA must be managed. It may have to be modified as the environment changes, and it must be reviewed with developers on a regular basis to see if the service level is adequate.

Detailed Description Text (553):

Defining the SLA, with its specific, measurable criteria, is the basis for continuous improvement. The continuous improvement effort may focus on providing the same level of service with fewer resources, or on providing better service. An important part of quality management is ensuring that the Environment Management team understands the key performance indicators for service delivery, that these indicators are monitored, and that all personnel are adequately equipped with the tools and training to fill their responsibilities. While the entire team is responsible for delivering quality, the responsibility for Quality management should be assigned to a specific individual on the Environment Management team.

Detailed Description Text (584):

In the development environment, it may be possible to outsource certain Systems Management tasks. For example, the LAN supplier may be willing to take

responsibility for LAN support, upgrades, and so on. Similarly, an existing data processing center may be willing to take responsibility for host operations. Such agreements are very beneficial and make it possible to use project team members more effectively. However, outsourcing the development environment carries a risk, which can be mitigated by defining a Service Level Agreement with the provider. This will generally be very similar to the SLA established between the Environment Management team and the developers. One important difference is that punitive measures (to be applied if the SLA is not respected) must be specified to ensure that outside suppliers are strongly motivated to abide by the agreement.

Detailed Description Text (593):

Once the SLA is defined, the resources required for delivering the service can be specified. Questions to address include the staffing of these resources and training to ensure that they are equipped to deliver service as agreed.

Detailed Description Text (779):

Service level test--ensures that once the application is rolled out, it provides the level of service to the users as specified in the Service Level Agreement (SLA).

Detailed Description Text (782):

The operational readiness test is the point in the development process where all the application development, architecture development, and preparation tasks come together. The operational readiness test ensures that the application and architecture can be installed and operated in order to meet the SLA.

Detailed Description Text (1269):

Tools to support the creation, management, and reporting of Service Level Agreements (SLAs) and Operations Level Agreements (OLAs)

Detailed Description Text (2104):

Understanding the anticipated volumes will provide key input to sizing the system. Predicted business volumes stated in the SLA should be used to help determine the appropriate sizes for machines, databases, telecommunications lines, etc. Alternatively, experience from previous engagements can provide useful input.

Detailed Description Text (2194):

This will be defined in detail within the SLA, but high level service recovery targets must be understood, so that high level recovery plans can, in turn, be produced.

Detailed Description Text (2201):

Hardware Maintenance maintains all of the components within a distributed system to protect the investment of the organization. Generally agreed upon in the SLAs, maintenance contracts are carried out, monitored and recorded for each asset as appropriate.

Detailed Description Text (2205):

Billing & Accounting also makes payments to service providers for services and equipment provided in accordance with agreed upon SLAs. As part of this payment process Billing & Accounting reconciles bills from service providers against monitored costs and SLA/OLA violations.

Detailed Description Text (2208):

Capacity Modeling & Planning ensures that adequate resources will be in place to meet the SLA requirements, keeping in mind operational requirements which may require additional capacity. Resources can include such things as physical facilities, computers, memory/disk space, communications lines and personnel. Through this component, changes to the existing environment will be determined, modeled and planned according to the necessary requirements.

Detailed Description Text (2227):

The tool should provide control dependencies to schedule workloads such as: Task/job sequence enforcement, external/internal event driven. Graphically displays work flow from the scheduling criteria and includes such information as task/job name, task description, average run time and resource requirements. Allow clients to define user schedules that can be based on predecessor events in the production environment. Reporting capabilities for forecasting, simulation and analyzing scheduled workload. Monitoring capability of past, present and future workloads as well as tracking of current workload termination notification of normal or abnormal completion.

Detailed Description Text (2233):

Communication with Performance management component to forecast resource requirements, such as near line storage, DASD space, and etc..

Detailed Description Text (2257):

Large print jobs may utilize system resources considerably (e.g., WAN, LAN, printer), and may tie up the printing queue for other individuals. This type of printing should be performed in off-hours or delayed to avoid contention for the printer during business hours.

Detailed Description Text (2412):

The existing skills must be assessed and a forward-thinking training direction must be defined. The training plan will likely emphasize newer technologies and different methods of training with the underlying goal of providing the appropriate level of service as required by the SLAs.

Detailed Description Text (2533):

Rollout Planning handles the greatest period of change in distributed systems management--system rollout and installation. During rollout every site and every user may be impacted by the changes taking place. Since delivery of the system will affect how well it is received by the users and is oftentimes defined by an SLA(s), delivery of the system must take place smoothly with minimal interruption to the users. This can be challenging when both old and new architecture domains must exist concurrently until the rollout has been completed.

Detailed Description Text (2610):

Capacity Modeling & Planning ensures that adequate resources will be in place to meet the SLA requirements, keeping in mind operational requirements which may require additional capacity. Resources can include such things as physical facilities, computers, memory/disk space, communications lines and personnel. Through this component, changes to the existing environment will be determined, modeled and planned according to the necessary requirements.

Detailed Description Text (2613):

Capacity Planning & Modeling must coordinate the requirements across the system (e.g., networks, servers, workstations, CPU, etc.) Capacity is driven by the need to meet SLAs with the user communities and as part of the planning and modeling process, future threats to capacity should be identified.

Detailed Description Text (2618):

Performance Management ensures that the required resources are available at all times throughout the distributed system to meet the agreed upon SLAs. This includes monitoring and management of end-to-end performance based on utilization, capacity, and overall performance statistics. If necessary, Performance Management can make adjustments to the production environment to either enhance performance or rectify degraded performance.

Detailed Description Text (2624):

Performance Management needs to consider performance from a business perspective, not merely a systems one. Most transactions in distributed systems utilize a wide variety of resources, and the measurement of end-to-end response time becomes the sum of the time expended by each one of the components sequentially involved in the transaction less the time while components were processing in parallel.

Detailed Description Text (2632):

It may be necessary to measure business critical transactions only; specified within the SLA. If the facility to select specific transactions is required, significant customization of the system may be necessary.

Detailed Description Text (2636):

As SLAs will likely be tied in some way to performance, it is important to monitor and correct the systems performance as it degrades to ensure that operational levels are maintained and that the SLA(s) will not be violated.

Detailed Description Text (2649):

Resource utilization statistics may be used to generate costing, and potential billings for customers.

Detailed Description Text (2671):

To ensure that the Operability Principles have been satisfied, each release should, in principle, undergo a release test of a full business cycle (to show that Operations can run it) and full business volumes (to show that SLA targets can be achieved). These tests are, however, expensive in terms of dedicated hardware requirements, people, and elapsed time.

Detailed Description Text (2714):

Hardware Maintenance maintains all of the components within a distributed system to protect the investment of the organization. Generally agreed upon in the SLAs, maintenance contracts are carried out, monitored and recorded for each asset as appropriate.

Detailed Description Text (2736):

Performance Management ensures that the required resources are available at all times throughout the distributed system to meet the agreed upon SLAs. This includes monitoring and management of end-to-end performance based on utilization, capacity, and overall performance statistics. If necessary, Performance Management can make adjustments to the production environment to either enhance performance or rectify degraded performance.